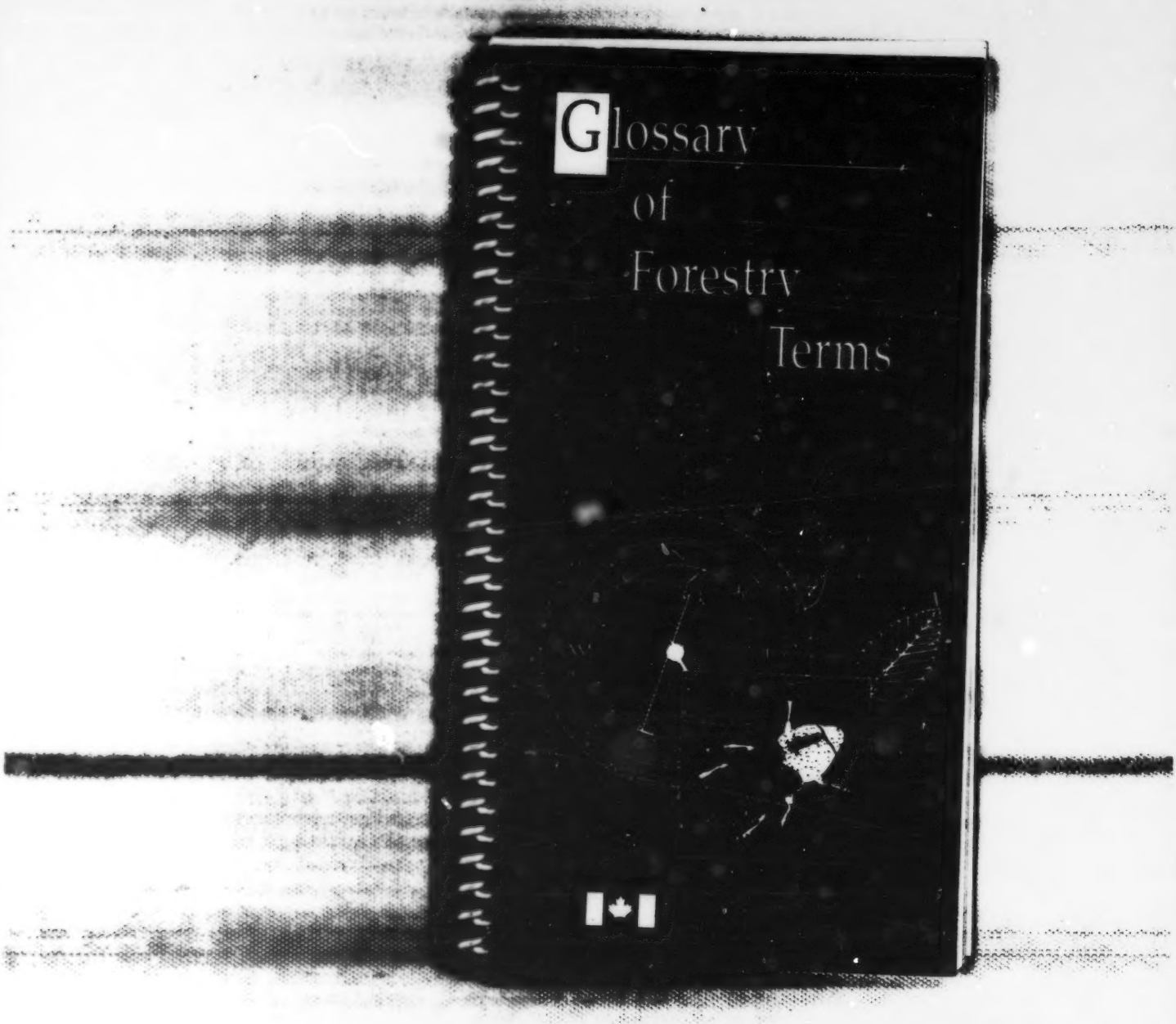
Glossary
of
Forestry
Terms

This glossary has been published by Forestry Canada, Pacific and Yukon Region.
It originally appeared as an appendix to "Managing Your Woodland: a non-forester's guide to small scale forestry in British Columbia", published under the Canada-British Columbia Forest Resource Development Agreement (FRDA)

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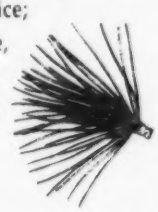
Forestry, like any profession, has special terms (and special meanings for some common words like 'crown' and 'chain') to describe its practices. Often there are formal and less formal definitions in use, but in some cases there are many levels of definition for specific terms.

The glossary that follows has tried to define as simply as possible common forestry terms. The definitions are more explanatory than definitive, and are not always comprehensive. More formal definitions can be found in several of the manuals (Silviculture, Policy, Inventory, Protection) produced by the B.C. Ministry of Forests.

Additional recommended reference glossaries include: "A Guide to Canadian Forest Inventory Terminology and Usage". 1978. Bonnor M., CFS; "The Woodland Workbook - Glossary of Woodland Words". 1983. Extension Circular 1155, Oregon State University Extension Service; "Terminology of Forest Science, Technology, Practice & Products". 1971. Society of American Foresters, Washington, D.C.



advanced regeneration: Trees that have become established naturally under a mature forest canopy and are capable of becoming the next crop after the mature crop is removed.

adverse slope: An uphill incline for hauling or skidding of logs or other loads.

aerial photography: Photos taken from the air at regular intervals and used in photo interpretation to provide much information about forests and landforms.

age class: Any interval into which the age range of trees, forests, stands or forest types is divided for classification and use. Forest inventories commonly group trees into 20-year age class groups.

agro-forestry: The practice of raising trees and agriculture products such as forage and or livestock on the same area at the same time.

Allowable annual cut

allowable annual cut (AAC): The average volume of wood which may be harvested annually under sustained yield management. Roughly equal to the amount of new growth produced by the forest each year including a proportion of the mature volume less deductions for losses due to fire, insects and disease.

amortization: A procedure by which the capital cost of projects, such as roads or bridges, is written off over a longer period as the timber volumes developed by the projects are harvested and extracted.

artificial regeneration: Establishing a new forest by planting seedlings or by direct seeding (as opposed to natural regeneration).

azimuth: The horizontal angle or bearing of a point measured from the true (astronomic) north. Used to refer to a compass on which the movable dial (used to read direction) is numbered in 360°. See also bearing. (*see next page*)

Azimuth

Azimuth compass

Backlog

backlog: A Ministry of Forests term applied to forest land areas where silviculture treatments such as planting and site preparation are overdue. Planting is considered backlog if more than 5 years have elapsed since a site was cleared (by harvesting or fire) in the Interior and more than 3 years on the Coast.

bareroot seedling: Stock whose roots are exposed at the time of planting (as opposed to container or plug seedlings).

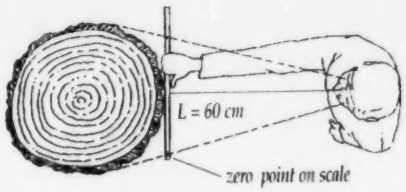
bareroot plugstock

Seedlings are grown in nursery seedbeds and lifted from the soil in which they are grown to be planted in the field.

basic silviculture: A term used by the Ministry of Forests to refer to the silviculture treatments that are carried out to ensure the establishment of a free-growing tree crop. May include: surveying, site preparation, planting, direct seeding, or brushing. See also intensive silviculture.

bearing: A direction on the ground or on a map defined by the angle measured from some reference direction: this may be true (geographic) north, magnetic north, or grid north. Used also to refer to a compass on which the movable dial (used to read direction) is numbered as four 90° quadrants where N=0, S=0, E=90, W=90.

Biltmore stick: A stick graduated in such a way that the diameter of a standing tree may be estimated when the stick is held across the main axis of the tree at a distance from the eye for which the stick is graduated (usually 60 cm). *(see next page)*



Biltmore stick

biogeoclimatic classification: The delineation of biotic regions or zones on the basis of vegetation, soils, topography, and climate.

biological maturity: In stand management, the age at which trees or stands have peaked in growth rate and are determined to be merchantable. See also rotation age.

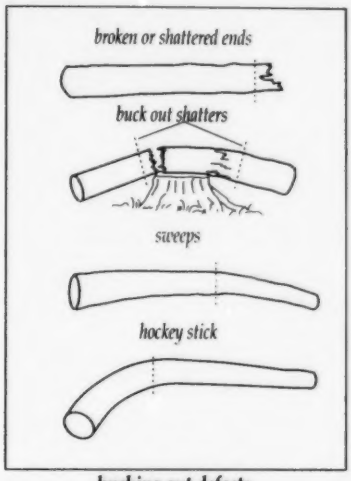
broadcast burning: A controlled burn, where the fire is intentionally ignited and allowed to proceed over a designated area within well-defined boundaries, for the reduction of fuel hazard or for site preparation. Also called slash burning.

Brushing

brushing: A silviculture treatment to remove brush and weed species which compete with seedlings for sunlight, water, and soil nutrients. See also conifer release.

brush rake: A tool used in mechanical site preparation to penetrate and mix soil and tear roots.

bucking: Cutting a felled tree into specified log lengths.



bucking out defects

Buffer strip

buffer strip: A strip of land (often including undisturbed vegetation) where disturbance is not allowed or is closely monitored to preserve or enhance aesthetic and other qualities along or adjacent to roads, trails, watercourses and recreation sites.

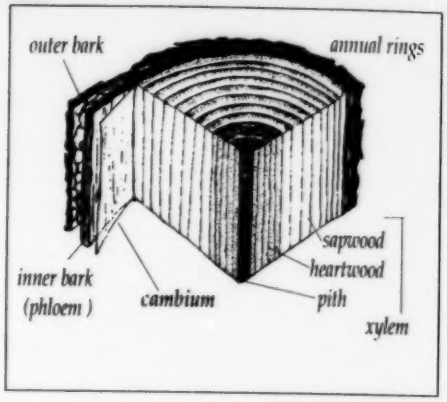
Business Plan: A plan identifying markets, customers, expenditures, and finances required to carry out the identified 'business' based on projected revenues and costs over a specific period of time.

Cambium

cambium: A single layer of cells between the woody part of the tree and the bark. Division of these cells results in diameter growth of the tree through formation of wood cells (xylem) and inner bark (phloem). (*see next page*)

canopy: The forest cover of branches and foliage formed by tree crowns.

chain: A measuring tape, often nylon, 50 m or 75 m in length, used to measure distances.



choker: A noose of wire rope used for skidding or yarding logs. (*see highlead system*)

clearcutting: The harvesting of all trees from an area of forest land in a single cut.

climax forest: A forest community that represents the final stage of natural forest succession for its locality, i.e. for its environment. Often identified as those forests that can reproduce indefinitely, i.e. in their own shade.

clinometer: A simple instrument for measuring vertical angles or slopes. In forestry, used to measure distance and tree heights.

close utilization: Maximum stump height of 30 cm; minimum top dib of 10 cm. See also utilization standards.

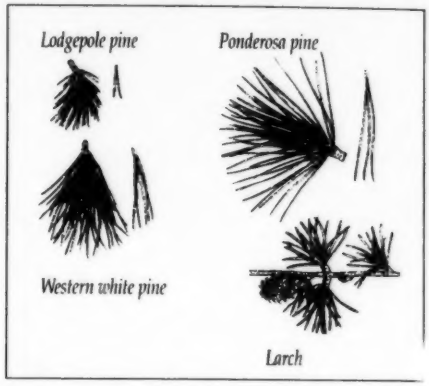
closed canopy: The description given to a stand when the crowns of the main level of trees forming the canopy are touching and intermingled so that light cannot reach the forest floor.

codominant: In stands with a closed canopy, those trees whose crowns form the general level of the canopy and receive full light from above, but comparatively little from the sides. In young stands, those trees with above average height growth.

commercial thinning: A silviculture treatment that 'thins' out an overstocked stand by removing trees that are large enough to be sold as products such as poles or fence posts (as opposed to juvenile spacing). It is carried out to improve the health and growth rate of the remaining crop trees.

Coniferous

coniferous: Cone-bearing trees having needles or scale-like leaves, usually evergreen, and producing wood known commercially as 'softwoods'.



coniferous (softwoods)

conifer release: To 'release' established coniferous trees from a situation in which they have been suppressed by thinning out undesirable trees and shrubs which have overtopped them. Carried out to improve the growth of the coniferous trees released. See also brushing.

Conk

conk: A hard, spore-bearing structure of a wood-destroying fungus which projects beyond the bark of a tree.

contour maps: A topographic map which portrays relief by means of contour lines.

control points: A system of points with established positions or elevations, or both, which are used as fixed references in positioning map features.

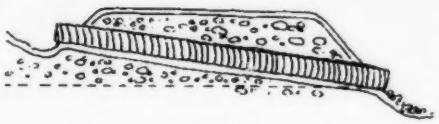
crop tree: A tree in a young stand selected to be retained until final harvest.

crown: The live branches and foliage of a tree.

Crown land: Land that is owned by the Crown, or Province. Referred to as federal Crown land when it is owned by Canada, e.g. Indian Reserves, Dept. of National Defense Lands.

Culvert

culvert: A drain or covered channel that crosses under a road to lead water from the upper to the lower side.



culvert

cut bank: The excavated bank from a ditch line to the top of the undisturbed slope of a road.

cut block: A specific area with defined boundaries authorized for harvest.

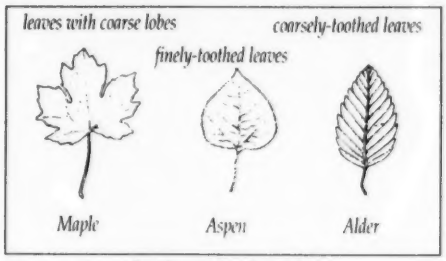
cutting permit: The document that contains the authority to harvest trees on a Woodlot Licence.

cut period: The interval between major harvesting operations in the same stand.

Dbh

dbh (diameter breast height): The stem diameter of a tree measured at breast height, about 1.3 metres above the point of germination. On flat terrain this would be ground level; on sloping terrain this would be the mid-point of the slope between the upper and lower sides of the tree.

deciduous: Term applied to trees, commonly broadleaf, that usually shed their leaves annually. Also known commercially as 'hardwoods'.



deciduous (hardwoods)

declination (magnetic): The angle between true (geographic) north and magnetic north (direction of the compass needle). The magnetic declination varies for different places and is 'set' on a compass for a particular location to enable magnetic north to be used as a reference point for true north.

Defoliator

defoliator: An insect that damages trees by eating leaves or needles.

depletion: An income tax allowance reflecting the purchase price paid for merchantable timber, usually on fee simple land. Also, a term used to refer to the process of harvesting your growing stock.

depreciation: Reduction in the value of assets, such as equipment and buildings, resulting from their use. Annual income tax allowance for asset depreciation varies with the nature of the asset.

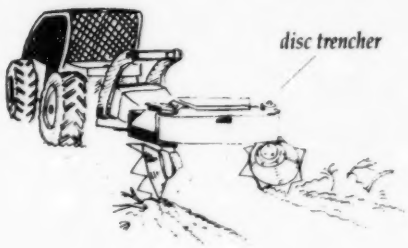
development objectives: The short-term (often 5-year) planning objectives for a specific Management Area.

Development Plan: A specific plan outlining harvesting, road construction, protection, and silviculture activities over the short-term (often 5 years) in accordance with the approved Forest Management Plan.

Diameter tape

diameter tape: A graduated tape based on the relationship of circumference to diameter which provides direct measure of tree diameter when stretched around the outside of the tree, usually at breast height. See also dbh.

dib (diameter inside bark): The diameter of a tree or log excluding bark thickness.

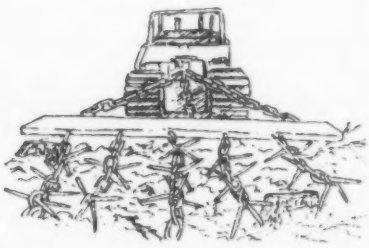


disc trencher: A machine designed for mechanical site preparation. It provides continuous rows of planting spots rather than intermittent patches as provided by patch scarifiers. Consists of scarifying steel discs equipped with teeth.

Dominant

dominant: Trees with crowns extending above the general level of the canopy and receiving full light from above and partly from the side; taller than the average trees in the stand with crowns well developed.

dot grid: A transparent sheet of film (overlay) with systematically arranged dots, each dot representing a number of area units. Used to determine areas on maps, aerial photos, plans, etc.



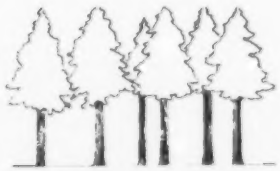
drag scarification

drag scarification: A method of site preparation that disturbs the forest floor and prepares logged areas for regeneration. Often carried out by dragging chains or drums behind a skidder or tractor.

Environmental Sensitive Areas

Environmental Sensitive Areas (ESA): ESAs for forestry include potentially fragile or unstable soils that may deteriorate unacceptably after forest harvesting, and areas of high value to non-timber resources such as fisheries, wildlife, water, and recreation.

extension services: Assistance provided to woodland operators. May include help with the preparation of forest management plans, cutting permits, marking trees for selective cutting, and guidance in carrying out slash disposal, site preparation, planting, etc.



even-aged

even-aged: A forest stand or forest type in which relatively small (10-20 year) age differences exist between individual trees. Even-aged stands are often the result of a single regeneration event such as clearcutting or a seed cutting in the shelterwood method.

Favourable slope

favourable slope (or grade): A downhill (i.e. gravity-assisted) incline for hauling or skidding of logs or other loads.

feller-buncher: A harvesting machine that cuts a tree with shears or a saw and then piles it.

felling: The act of cutting down a standing tree.

fertilization: The addition of fertilizer to promote tree growth on sites deficient in one or more soil nutrients. Also used to improve the vigour of crop trees following juvenile spacing or commercial thinning.

fill bank: The fill material used to shape a road from the outer edge of the travelled portion to its intersection with the existing ground profile.

fill-in planting: Planting required to supplement poorly stocked natural regeneration or to replace seedlings that have died on previously planted sites.

financial maturity: The age at which a stand of timber offers the maximum return on investment in terms of volume and grade yield.

Firebreak

firebreak: Areas or strips of less flammable fuels that are either natural (standing timber or landslides) or are made in advance (cat trails or roads) as precautionary measures, separating areas of greater fire hazard.

fire guard: A man-made barrier (often an area cleared of fuels) constructed at the time of a fire to control it and provide a point from which to carry out fire suppression.

Fisheries Sensitive Zones: Aquatic environments important for the life history of fish including areas which may not be defined as streams. May include: side and flood channels, swamps, seasonally flooded depressions, lake spawning areas or estuaries.

fixed area plot sampling method: A controlled cruise method where small plots of a fixed size are used to sample a portion of a forest area to obtain information (such as tree volume) that can be used to describe the whole area.

Flagging tape

flagging tape: Coloured plastic tape which comes in rolls and is used to mark (flag) boundaries or identify certain trees or objects.

forest: A plant community predominantly of trees and other woody vegetation growing more or less closely together.

forest cover map: A map showing relatively homogeneous forest stands or cover types produced from the interpretation of aerial photos and information collected in field surveys. Commonly includes information on species, age class, height class, site, and stocking level.

forest ecology: The relationships between forest organisms and their environment.

forest inventory: A survey of a forest area to collect such data as area condition, timber volume and species, for specific purposes such as planning, purchases, evaluation, management, or harvesting.

forest land (B.C. Assessment Authority): Land having as its highest and best use the growing and harvesting of trees.

Forest management cycle

forest management cycle: The phases that occur in the management of a forest including harvesting, site preparation, reforestation, and stand tending.

Forest Management Plan: A general plan for the management of a forest area, usually for a full rotation cycle, including the objectives, prescribed management activities and standards to be employed to achieve specified goals. Commonly supported with more detailed Development Plans.

forest renewal: The renewal of a tree crop by either natural or artificial means.

forest type: A group of forested areas or stands of similar composition (species, age, height, and stocking) which differentiates it from other such groups.

forest type labels: The symbols which are used to code information about forest types on a forest cover map, e.g. site, disturbance, age and height class, species, stocking.

Forest type lines

forest type lines: Lines on a map or aerial photo outlining forest types.

free-growing: Young trees that are as high or higher than competing brush vegetation with one metre of free-growing space surrounding their leaders.

fruiting body: The reproductive part of a fungus that contains or bears spores. Also known as a conk.

fuelbreak: See firebreak.

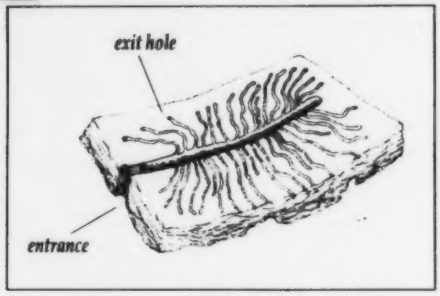
fuel management: The activities carried out to modify fuel accumulations (slash) to reduce the chance of ignition and rate of fire spread.

Fuelwood

fuelwood: Trees used for the production of firewood logs or other wood fuel.

fungus: A plant that obtains its nourishment through the organic matter of other plants, causing decays.

Galleries

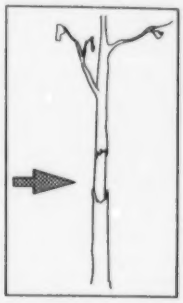


galleries

galleries: Passages carved out under bark or in wood by insects feeding or laying eggs.

girdling: To kill a tree by severing or damaging the cambium layer and interrupting the flow of food between the leaves and the rest of the tree. A method of 'brushing' carried out using a hatchet or special tool to cut through the bark and cambium of the tree.

Girdling



girdling

grading: Classifying timber, lumber or logs according to quality or end-use.

grapple yarder: A machine used in harvesting to bring logs into a landing. The grapple closes like teeth around the log and is controlled by the machine operator.

green belt: A strip of undisturbed soil and vegetation left along waterways or access routes to minimize the environmental impact from development. See also buffer strip.

gross sales: Where the buyer purchases on an area basis all timber for a fixed price.

Gross total volume

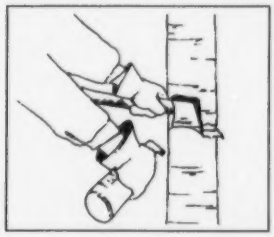
gross total volume: Volume of the main stem of the tree including stump and top. Volume of the stand including all trees.

Habitat

habitat: The place where an organism lives and/or the conditions of that environment including the soil, vegetation, water, and food.

habitat management: Management of the forest to create environments which provide habitats (food, shelter) to meet the needs of particular species of wildlife, birds, etc.

hack and squirt: A method of conifer release and juvenile spacing where the bark of a tree is cut (hack) and herbicides are injected (squirt) to kill the tree.



Harvest cut

harvest cut: The felling of the mature crop of trees either as a single clearcut or a series of regeneration cuttings.

harvesting: The cutting and removal of trees from a forested area.

hauling: A general term for the transport of logs from one point to another, usually from a landing to the mill or shipping point.

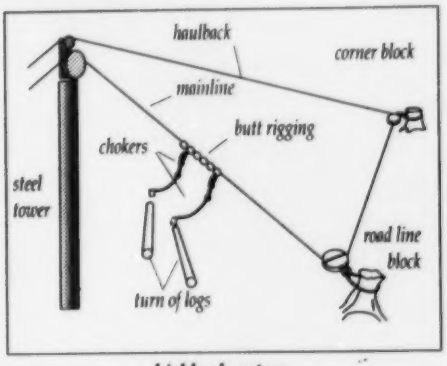
heartwood: The inner core of a woody stem composed of nonliving cells and usually differentiated from the outer wood layer (sapwood) by its darker colour. (*see cambium*)

height class: Any interval into which the range of tree heights is divided for classification and use, commonly 3 m, 5 m, or 10 m classes.

height/diameter curve: A graphic representation of the relationship between individual tree heights and diameters used to determine tree volumes in localized areas.

High-grading

high-grading: The removal of only the best trees from the stand, often resulting in a poor-quality residual stand.



highlead system

highlead system: Logging system that uses cables rigged to a spar high above the ground so that one end of the logs can be lifted during yarding.

hinge wood: The holding wood between the undercut and the backcut that acts as a hinge to control the direction of the fall.

H ip chain

hip chain: A device used to measure distance by means of an anchored filament wrapped around a wheel that revolves as you walk (handy for measuring distances on your own).

humus: A general term for the more or less decomposed plant and animal residues in the upper soil layer.

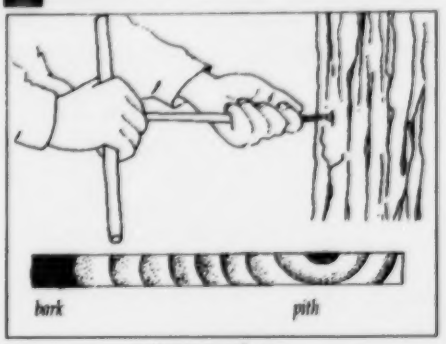
hypsometer: A simple instrument, often a stick or other straight edge, used to measure the heights of trees on the basis of similar angles.

I mprovement cutting

improvement cutting: The removal of trees of undesirable species, form or condition from the main canopy of the stand to improve the health, composition and value of the stand.

increment borer: A tool used to extract a core of wood from a living tree for the purpose of studying the annual growth rings of the tree.

I ncrement borer



increment borer

incremental silviculture: See intensive silviculture.

increment core: That part of the cross section of a tree extracted by an increment borer. Used to determine tree age and growth pattern.

integrated forest companies: Forest companies that both produce logs and manufacture them into lumber, pulp, and other wood products.

integrated resource management: The management of two or more resources in the same general area, commonly includes water, soil, timber, range, fish, wildlife, and recreation.

Intensive silviculture

intensive silviculture: A Ministry of Forests term that refers to the treatments carried out to maintain or increase the yield and value of forest stands. Includes treatments such as site rehabilitation, conifer release, spacing, pruning, and fertilization. Also known as incremental silviculture. See also basic silviculture.

intertree distance: The distance between tree crowns, usually used in the context of thinning. Recommended guidelines for intertree distances are established for different thinning programs depending on site variables, the species and age of trees, and management objectives.

Juvenile spacing

juvenile spacing: A silvicultural treatment to reduce the number of trees in young stands, often carried out before the stems removed are large enough to be used or sold as a forest product. Prevents stagnation and improves growing conditions for the remaining crop trees so that at final harvest the end-product quality and value is increased. See also commercial thinning.

Kickback

kickback: The sudden and dangerous jump of the butt of a falling tree as it comes down. Also, the abrupt and dangerous backward movement of a chainsaw toward the operator, often caused by touching the moving chain at the tip of the bar to an object when starting to cut.

Landing

landing: The area where logs are collected for loading.

Litter layer

litter layer: The layer of organic debris, mainly bark, twigs, and leaves, on the forest floor.

logging plan: A schedule of operations for a specific area that describes in words and on a map how and where harvesting will take place.

loss factors: Reductions made to gross volumes to allow for decay, waste, and breakage.

MAI

MAI (mean annual increment): The average annual increase in volume of individual trees or stands up to the specified point in time. The MAI changes with different growth phases in a tree's life, being highest in the middle years and then slowly decreasing with age. The point at which the MAI peaks is commonly used to identify the biological maturity of the tree and its readiness for harvesting.

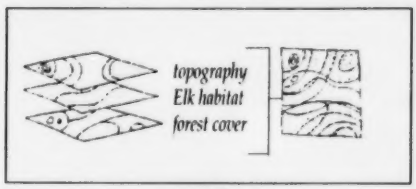
Management Area: Stands or forest types that require similar management practices and can be grouped for treatment as a management unit.

Managed forest land

managed forest land: Forest land that is being managed under a forest management plan.

management objectives: The long-term management strategies for the forest area.

map folio: A series of maps bound together, often produced as overlays of information, e.g. soils, fish, water, forest, and wildlife.



map folio

merchantable timber. A tree or stand that has attained sufficient size, quality and/or volume to make it suitable for harvesting.

merchantable volume: The amount of sound wood in a single tree or stand that is suitable for marketing under given economic conditions.

meridian lines: A north-south reference line often appearing on maps. Meridian lines are also etched into the bearing plate on a compass.

microclimate: Generally the climate of small areas, especially insofar as this differs significantly from the general climate of the region. Stands often create microclimates.

microsite: A small area which exhibits localized characteristics different from the surrounding area. For example, the microsites created by a rock outcrop with thin soils, or the shaded and cooled areas created on a site by the presence of slash.

mil rate: Property assessment based on a set rate per $1,000 of land value.

natural regeneration: The renewal of a tree crop by natural as opposed to human means, e.g. seed on-site from adjacent stands, or brought in by wind, birds, or animals.

net present value (NPV): A stand's present worth before harvesting once costs associated with its establishment and tending have been subtracted.

net volume: Volume of the main stem excluding stump and top as well as the defective and decayed wood of trees or stands.

non-forest land: Land not primarily intended for growing or supporting a forest.

non-timber resources: Resources other than timber, such as recreation, aesthetics, wildlife, fish, forage, range, water, and soils.

NSR (not satisfactorily restocked): Productive forest land that has been denuded and has failed partially or completely to regenerate naturally or to be artificially regenerated.

Operational cruise

operational cruise: An estimate, to a specified degree of accuracy, of the volume of timber on an area to be harvested.

overstorey: That portion of the trees in a forest of more than one storey forming the upper or uppermost canopy layer.

overtopping: Vegetation higher than the favoured species, as in brush or deciduous species shading and suppressing more desirable coniferous trees.

Per hectare factor

per hectare factor: A number used to convert sample plot information to per hectare information (as in converting the plot volume to be a per hectare volume).

periodic harvests (periodic cut): The removal of several years' accumulated AAC in one year or other period.

pest: An organism capable of causing material damage. Forest pests include insects and diseases.

bark beetle

Phloem

phloem: A layer of tree tissue just inside the bark that conducts food from the leaves to the stem and roots. (*see cambium*)

pioneer plants: A succession term for plants capable of invading bare sites, e.g. a newly exposed soil surface and persisting there, i.e. 'colonizing' until supplanted by invader or other succession species.

pitch tubes: A tubular mass of resin that forms on the surface of bark at bark-beetle entrance holes.

pith: The central core of a stem and of some roots, representing the first year of growth and consisting mainly of soft tissue.(*see increment borer*)

plot: A carefully measured area laid out for experimentation or measurement.

plug: A seedling grown in a small container under carefully controlled (nursery) conditions. When seedlings are removed from containers for planting, the nursery soil remains bound up in their roots. (*see bareroot seedling*)

Point of sale

point of sale: The specific area where a product (i.e. tree, log) becomes the property of the buyer.

pre-harvest silviculture assessment (or survey): The survey carried out on a stand prior to logging to collect specific information on the silvicultural conditions such as planting survival, free-growing status, stocking, etc. See also silvicultural survey.

pre-harvest silviculture prescription: A planning system that collects site-specific field data and develops forest management prescriptions for cut blocks in advance of logging.

prescribed burning: The knowledgeable application of fire to a specified land area to accomplish designated land management objectives.

provincial forest inventory: A description of the quantity and quality of forest trees, non-wood values, and many of the characteristics of the land base compiled from statistical data for the forest lands of the Province.

Pruning

pruning: The manual removal of the lower branches of crop trees to a predetermined height to produce clear, knot-free wood.

Railway grade

railway grade: the road-bed upon which ties and rails were laid.

reamer: A steel tool with a tapered shank used for freeing 'stuck' increment cores from an increment borer.

reforestation: The natural or artificial restocking (i.e. planting, seeding) of an area with forest trees. Also called forest regeneration.

regeneration delay: The maximum time allowed for initial restocking of a denuded area (as a result of harvesting, fire, etc.) with the minimum number of acceptable trees. The time is measured in growing seasons from the beginning of denudation.

regeneration performance assessment (RPA): A sampling survey carried out to collect field data on the height growth, competition, and stocking of young stands (5-10 years).

Regeneration survey

regeneration survey: Carried out to determine the initial restocking of a site. It is used to describe the number of trees on a site that have reached acceptable standards.

registered professional forester: A person registered under the Foresters Act who performs or directs works, services or undertakings requiring specialized knowledge, training and experience in forestry.

right-of-way: The strip of land over which a power line, railway line, road, etc., extends.

rotation age: The age at which a stand is considered mature and ready for harvesting.

Sanitation cutting

sanitation cutting: The removal of damaged or diseased stems to prevent the spread of insects or disease.

sapwood: The light-coloured wood that appears on the outer portion of a cross-section of a tree.(*see cambium*)

Scaling

scaling: The measuring of lengths and diameters of logs and calculating deductions for defect to determine volume.

scarification: A method of seedbed preparation which consists of exposing patches of mineral soil through mechanical action.

screefing: Removing weeds and small plants together with most of their roots from the area immediately surrounding a planting hole.

second growth: A second forest that develops after harvest of the original mature old-growth forest.

seedbed: In natural regeneration, the soil or forest floor on which seed falls; in nursery practice, a prepared area over which seed is sown.

seed orchard: An area of specially planted trees that have been selected for their superior characteristics (i.e. growth, volume, branching, pest resistance, etc.) to breed genetically improved seed.

selection cutting: An uneven-aged silviculture system in which trees are harvested individually or in small groups continuously at relatively short intervals.

seral stage: The series of changes occurring in the ecological succession of a plant community, e.g. pioneer stage or climax stage.

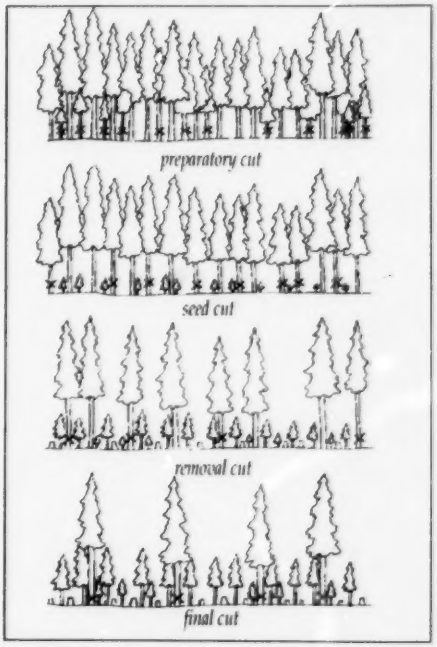
shade-tolerant: The capacity of a tree or plant species to develop and grow in the shade of, and in competition with, other trees or plants.

shearing: In Christmas tree culture, to prune the branches to make dense foliage and give the tree a conical shape.

shelterwood: Any harvest cutting of a more or less regular and mature crop designed to establish a new crop under the protection of the old. (*see next page*)

silviculture: The art and science of growing and tending a forest.

silviculture survey: A sampling procedure to determine silvicultural conditions such as planting survival, free-growing status, stocking, etc., leading to management decisions. See also pre-harvest silviculture assessment.



shelterwood method

Silviculture system

silviculture system: A process following accepted silvicultural conditions whereby forests are tended, harvested, and replaced.

site class: The measure of the relative productive capacity of a site for a particular crop or stand based on volume or height at a given age. Forest sites are broadly classed as good, medium, poor, or low.

site preparation: Disturbance of an area's topsoil and ground vegetation to create conditions suitable for regeneration.

site rehabilitation: The conversion of the existing unsatisfactory cover on highly productive forest sites to a cover of commercially valuable species.

skidder

skidder: A wheeled or tracked vehicle used for sliding/dragging logs from the stump to a landing.

Skidding

skidding: The process of sliding/dragging logs from the stump to a landing, usually applied to ground-based operations.

skid trail: A rough-formed, temporary forest trail suitable for use by horses or equipment such as bulldozers or skidders in bringing trees or logs from the actual place of felling to a landing.

skyline: A type of cable logging in which the mainline is stationary as a carriage moves along it carrying logs from the felling site to the landing.

slash: The residue left on the ground after felling, including unused logs, uprooted stumps, broken tops, etc.

slope correction tables: Tables with conversions from slope distance to horizontal distance.

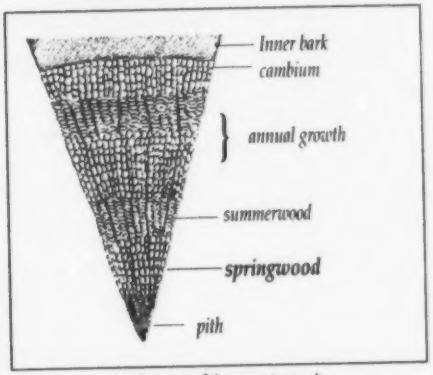
small-scale forestry: In general, non-industrial forestry operations. In B.C., small-scale forestry operations are carried out by Woodlot Licencees, Indian bands, and private landowners.

soil compaction: The compression of soil as a result of heavy equipment traffic.

Spacing

spacing: The act of removing trees from a stand to decrease the stand density, distribute the crop trees more evenly over the growing site, and create more growing room. See also intertree distance, juvenile spacing, and thinning.

special forest products: As defined under the Forest Act to include: poles; posts; pilings; shakes; shingle bolts; Christmas trees; building logs; mining timbers; props and caps; cribbing; firewood and fuel logs; hop poles; orchard props; car stakes; round stakes, sticks and pickets; split stakes, pickets, palings; shake bolts, blocks and blanks; shingle blocks.



springwood *(see next page)*

Springwood

springwood: The less dense, larger wood cells of an annual growth ring. Also called earlywood because it is formed early in the growing season.

spur road: A branch of a main or secondary road.

stand: A community of trees sufficiently uniform in species, age, arrangement or condition to be distinguishable as a group from the forest or other growth on the area.

stand density: A relative measure of the amount of stocking on a forest area. Often described in terms of stems per hectare.

stand improvement: Any silvicultural treatment that increases the growth, quality or value of trees in a stand.

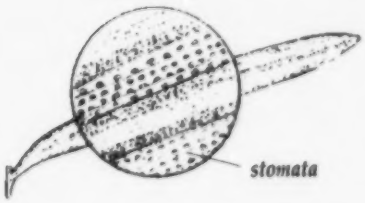
stand tending: A variety of forest management activities carried out at different stages in the life of a stand. Treatments may include: juvenile spacing; brushing; commercial thinning; fertilization; conifer release; site rehabilitation; mistletoe control; seed tree control; and pruning.

Statistical sampling

statistical sampling: The selection of sample units from a population and the measurement and/or recording of information on these units to obtain estimates of population characteristics.

stocking class: A numeric code representing a range of stems per hectare, sometimes estimated by crown closure on aerial photographs, e.g. stocking class 1 is mature with 76 + stems/ha of $\geq$ 27.5 cm dbh; class 2 is mature with < 76 stems/ha; class 0 is immature.

stomata: Pores in plant leaves that control the respiration of a plant.



strata: Groups of forest types with the same or similar species composition, age, and height class. (Plural of stratum).

Stratum

stratum: A subdivision of a forest area to be inventoried based on a group of trees with the same or similar species composition, age, and height class.

stream gradient: The general slope, or rate of vertical drop per unit of length of a flowing stream.

stumpage: The price that must be paid to the provincial government for timber harvested from Crown land.

stumpage appraisal: The process by which the stumpage to be charged for harvesting on any given area is estimated.

sub-grade: That part of a road consisting of the material already in place (the road base).

succession: The replacement of one plant community by another in progressive development toward climax vegetation.

summerwood: The denser, later-formed wood of an annual growth ring. Also known as 'latewood' referring to the time in the growing season that these cells are produced. (*see springwood*)

Suppressed

suppressed: Trees with crowns entirely below the general level of the crown cover receiving little or no direct light from above or from the sides.

survival assessment: A survey that estimates survival which is the percentage of trees living after a period of growth (often 2-5 years) following planting.

sustained yield: A method of forest management that calls for an approximate balance between net growth and amount harvested.

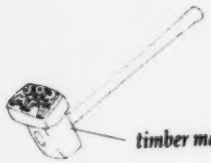
Tenure

tenure: The holding, particularly as to manner or term (i.e. period of time), of a property. Land tenure may be broadly categorized into private lands, federal lands, and provincial Crown lands. The Forest Act defines a number of forestry tenures by which the cutting of timber and other user rights to Crown land are assigned.

Thinning

thinning: The process of removing excess and poorer quality trees from a stand for the purpose of improving the growth and value of the remaining crop trees.

timber cruising: The collection of field data on forests commonly by the measurement and recording of information in sample plots. Includes the measurement and estimation of volumes of standing trees.



timber mark: A hammer indentation made on cut timber for identification purposes.

Tree Farm Licence: A form of tenure agreement which allows the long-term practice of sound forest management and harvesting on Crown land or on a combination of Crown and private land by private interests under the supervision of the Forest Service.

Tree-shearer

tree-shearer: A mechanical device used in felling that cuts or shears the standing tree off at the stump.

trim allowance: The extra length (usually 20 cm) of a bucked log to allow for trimming waste in the sawmill.

turnout: A space adjacent to a road in which vehicles may park or pull into to allow others to pass.

Understorey

understorey: That portion of the trees or other vegetation in a forest stand below the main canopy level.

uneven-aged: stands with a wide range of ages and sizes.

unit sales: Sale of timber based on an agreed 'price per unit of material for timber volume' with payment based on scaled volume.

Unmanaged forest land

unmanaged forest land: Forest land that is not subject to management under a forest management plan.

utilization standards: The utilization limits (stump height and top diameter inside bark) which define the trees considered commercially saleable by the Ministry of Forests, and therefore the dimensions of all trees that must be cut and removed from Crown land harvesting operations.

Variable area plot sampling method

variable area plot sampling method: A method of timber cruising commonly used for industrial timber cruising in which sampling area (plot size) varies with tree diameter.

Volume Table: A table showing the estimated average tree or stand volume based on given tree measurements, usually diameter and height.

V-plow: A forest plow with a V-shaped blade used to prepare strips for hand planting by removing surface debris and competing vegetation.

Water bar

water bar: A shallow trench cut into the surface of road or created by an embankment (e.g. log and soil) to collect and channel water off the surface to avoid erosion.

watershed: An area of land that collects and discharges water into a single main stream through a series of smaller tributaries.

weir: An enclosure set in a waterway for catching fish.

wildling: A seedling naturally reproduced outside of a nursery, used in forest planting.

windrowing: The concentration of slash, branchwood, and debris into rows to clear the ground for regeneration. Windrows are often burned.

windthrown: Uprooted by the wind.

witches' broom: An abnormal tufted growth of small branches on a tree or shrub caused by fungi or viruses.

Wolf tree

wolf tree: A vigorous tree that has merchantable value but occupies more space than its value warrants. Usually broad crowned, dominant, and very limby. Often a remnant from a previous stand.

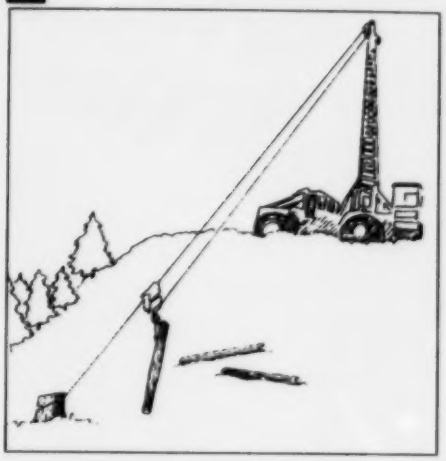
Woodlot Licence: An area of forest land containing not more than 400 ha of Crown land which may be managed in conjunction with some private land.

Xylem

xylem: The principal strengthening and water-conducting tissue of stems, leaves, and roots. (*see cambium*)

Yarding

yarding: Moving trees or logs from felling site to roadside with cable, winch, or helicopter. (*see next page*)



yarding